

## CLAIMS

1. A variable focus lens comprising:
  - a container enclosing an insulating liquid (A) and a conducting liquid (B), the insulating liquid (A) and the conducting liquid (B) being immiscible, having different refractive indices and being in contact with each other via an interface (14), the liquids (A; B) being at least partially placed in a light path through the container;
  - an electrode arrangement (2; 12) for controlling the shape of the interface (14) by means of a voltage;
  - the container further comprising a transparent end portion (4) in the light path, a part (4') of the transparent end portion (4) defining the shape of a part of the interface (14) at a predefined voltage (V1).
2. An variable focus lens as claimed in claim 1, wherein the predefined value (V1) of the applied voltage is 0V.
3. An electronic device (1) comprising:
  - a variable focus lens comprising:
    - a container enclosing an insulating liquid (A) and a conducting liquid (B), the insulating liquid (A) and the conducting liquid (B) being immiscible, having different refractive indices and being in contact with each other via an interface (14), the liquids (A; B) being at least partially placed in a light path through the container;
    - an electrode arrangement (2; 12) for controlling the shape of the interface (14) by means of a voltage;
    - the container further comprising a transparent end portion (4) in the light path, a part (4') of the transparent end portion (4) defining the shape of a part of the interface (14) at a predefined voltage (V1); and
    - driver circuitry (20) coupled to the electrode arrangement (2;12), the driver circuitry (20) being arranged to:

apply the predefined voltage (V1) across the electrode arrangement (2; 12) in an idle state of the variable focus lens; and

5        apply a further voltage (V1') across the electrode arrangement (2; 12) for separating the interface (14) from the transparent end portion (4) when the variable focus lens is enabled.

4.        An electronic device (1) as claimed in claim 3, wherein the further voltage (V1') is a further predefined voltage.

10    5.        An electronic device (1) as claimed in claim 3, wherein the electronic device (1) further comprises an image sensor (30) for sensing light passing through the variable focus lens, the image sensor (30) being arranged to provide the driver circuitry (20) with an output signal for controlling the magnitude of the further voltage (V1').